

### **THE AMENDMENTS**

#### **In the Specification:**

Please amend paragraph starting on line 5 of page 9 to read as follows:

FIGURES 3-1 to 3-8 depict an alignment of the amino acid sequences of 81 natural proteorhodopsin variants; Bac31A8 (SEQ ID NO: 3), Bac40E8 (SEQ ID No: 5), Bac64A5 (SEQ ID No: 7), Hot0m1 (SEQ ID No: 9), Hot75m1 (SEQ ID No: 1), Hot75m3 (SEQ ID No: 11), Hot75m4 (SEQ ID No: 13), Hot75m8 (SEQ ID No: 15), MB0m1 (SEQ ID No: 17), MB0m2 (SEQ ID No: 19), MB100m10 (SEQ ID No: 39), MB100m5 (SEQ ID No: 33), MB100m7 (SEQ ID No: 35), MB100m9 (SEQ ID No: 37), MB20m12 (SEQ ID No: 25), MB20m2 (SEQ ID No: 21), MB20m5 (SEQ ID No: 23), MB40m1 (SEQ ID No: 27), MB40m12 (SEQ ID No: 31), MB40m5 (SEQ ID No: 29), MED101 (SEQ ID No: 65), MED102 (SEQ ID No: 67), MED106 (SEQ ID No: 69), MED202 (SEQ ID No: 73), MED204 (SEQ ID No: 75), MED208 (SEQ ID No: 77), MED25 (SEQ ID No: 71), MED26 (SEQ ID No: 59), MED27 (SEQ ID No: 61), MED36 (SEQ ID No: 63), medA15\_r8\_1 (SEQ ID No: 123), medA15\_R8\_3 (SEQ ID No: 137), medA15\_r8ex7 (SEQ ID No: 143), medA15\_R8ex9 (SEQ ID No: 147), medA15\_r9\_3 (SEQ ID No: 149), medA15r10b5 (SEQ ID No: 139), medA15r11b3 (SEQ ID No: 121), medA15r11b9 (SEQ ID No: 115), medA15r8b3 (SEQ ID No: 119), medA15r8b8 (SEQ ID No: 155), medA15r8b9 (SEQ ID No: 127), medA15r8ex4 (SEQ ID No: 157), medA15r8ex6 (SEQ ID No: 111), medA15r9b5 (SEQ ID No: 117), medA15r9b7 (SEQ ID No: 135), medA17\_r8\_11 (SEQ ID No: 153), medA17\_r8\_15 (SEQ ID No: 151), medA17\_R8\_6 (SEQ ID No: 133), medA17R9\_1 (SEQ ID No: 125), medA19\_R8\_16 (SEQ ID No: 129), medA19\_R8\_19 (SEQ ID No: 131), medA19\_R8\_20 (SEQ ID No: 145), medA19\_r9\_9 (SEQ ID No: 141), PalB1 (SEQ ID No: 41), PalB2 (SEQ ID No: 43), PalB5 (SEQ ID No: 45), PalB6 (SEQ ID No: 49), PalB7 (SEQ ID No: 47), PalB8 (SEQ ID No: 51), PalE1 (SEQ ID No: 53), PalE6 (SEQ ID No: 55), PalE7 (SEQ ID No: 57), RED19 (SEQ ID No: 85), RED2 (SEQ ID No: 87), RED23 (SEQ ID No: 89), RED27 (SEQ ID No: 91), RED30 (SEQ ID No: 93), RED4 (SEQ ID No: 95), RED5 (SEQ ID No: 97), REDA9 (SEQ ID No: 79), REDB9 (SEQ ID No: 81), REDF9 (SEQ ID No: 83), REDr6a5a14 (SEQ ID No: 99), REDr6a5a6 (SEQ ID No: 101), REDr7\_1\_15 (SEQ ID No: 107),

REDr7\_1\_16 (SEQ ID No: 113), REDr7\_1\_4 (SEQ ID No: 103), REDs3\_15 (SEQ ID No: 109), REDs3\_7 (SEQ ID No: 105), ANT32C12 PR (SEQ ID No: 159), HOT2C01 PR (SEQ ID No: 161). The bold "**H**" indicates the position of a conserved histidine, which corresponds to H75 of Bac31A8. The bold "**R**" indicates the position of a conserved arginine, which corresponds to R94 of Bac31A8.